

The following is claimed:

1. A method for managing maintenance of equipment, the method comprising:

storing component data on components of an equipment;

storing worker data on maintenance personnel associated with

5 corresponding qualifications;

associating at least one predictive maintenance factor with the

corresponding component data; and

scheduling maintenance for a maintenance time period for at least one of

the components based on the component data, the worker data, the associated

10 predictive maintenance factor, and an elapsed time with respect to an installation  
date of at least one component.

2. The method according to claim 1 wherein the at least one predictive

maintenance factor comprises a longevity estimate for at least one of a

15 corresponding component, a corresponding assembly of the components, and  
the equipment.

3. The method according to claim 1 wherein the at least one predictive

maintenance factor comprises a probability-of-failure estimate for at least one of

20 a corresponding component, a corresponding assembly of the components, and  
the equipment.

4. The method according to claim 1 wherein the at least one predictive maintenance factor includes a financial estimate associated with the equipment.

5. The method according to claim 1 wherein the at least one predictive  
5 maintenance factor includes at least one of a longevity estimate, a probability-of-failure estimate, and a financial estimate.

6. The method according to claim 1 further comprising:  
receiving the component data from a supplier data source via a  
10 communications network.

7. The method according to claim 1 further comprising:  
receiving operational data on the equipment from an operational data  
source, the operational data including at least one of the component data,  
15 equipment data, and installation date of a component.

8. The method according to claim 1 further comprising:  
receiving operational data from a sensor of the equipment; the operational  
data being stored in a database along with the component data.

20 9. The method according to claim 1 further comprising:  
receiving the worker data from a human resources data source via a  
communications network.

10. A method for managing maintenance of equipment, the method comprising:
- organizing a first database of equipment components and corresponding  
longevities associated with the equipment components;
  - organizing a second database of maintenance personnel associated with
  - 5 corresponding personnel locations and qualifications;
  - scheduling maintenance for the equipment component within a scheduled  
time period prior to expiration of its corresponding longevity; and
  - allocating the maintenance personnel and procuring the equipment  
component, based on the first database and the second database, consistent
  - 10 with the scheduled time period and availability of the maintenance personnel at  
an equipment location of the equipment.
11. The method according to claim 10 wherein the equipment is mobile and  
wherein the allocating brings together the maintenance personnel, the equipment
- 15 component, and the equipment at the location during the scheduled time period.
12. The method according to claim 10 further comprising tracking an installation  
date for a corresponding component of the equipment.
- 20 13. The method according to claim 12 further comprising the step of estimating  
a remaining life span by determining a usage time span between the installation  
date and the present date, and deducting the usage time span from the longevity  
for a corresponding component.

14. The method according to claim 13 wherein the usage time span represents a measure of an aggregate active duration of the component or the equipment.

15. The method according to claim 13 wherein the usage time span represents the passage of time, regardless of whether or not the equipment is active.

16. A system for managing maintenance of equipment, the system comprising:

a storage device for storing component data on components of an equipment; the storage device arranged to store worker data on maintenance

10 personnel associated with corresponding qualifications;

a predictive maintenance controller for associating at least one predictive maintenance factor with the corresponding component data; and

a scheduler for scheduling maintenance for a maintenance time period for at least one of the components based on the component data, the worker data,

15 the associated predictive maintenance factor, and an elapsed time with respect to an installation date of at least one component.

17. The system according to claim 16 wherein the predictive maintenance controller comprises a longevity estimator for providing a longevity estimate for at

20 least one of a corresponding component, a corresponding assembly of the components, and the equipment.

18. The system according to claim 16 wherein the predictive maintenance controller comprises a probability-of-failure estimator for estimating a probability of failure for at least one of a corresponding component, a corresponding assembly of the components, and the equipment.

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19. The system according to claim 16 wherein the predictive maintenance controller comprises a financial analyzer for determining a financial estimate associated with respect to maintenance of the equipment.

10 20. The system according to claim 16 wherein the predictive maintenance controller comprises at least at least one of a longevity estimator, a probability-of-failure estimator, and a financial analyzer.

21. The system according to claim 16 further comprising:

15 a supplier data source;

a communications interface for receiving the component data from the supplier data source, the communications interface providing the component data to a first database of the storage device.

20 22. The system according to claim 16 further comprising:

a communications interface for receiving operational data on the equipment from an operational data source, the communications interface providing the operational data to the storage device.

23. The system according to claim 16 further comprising:

a communications interface associated with the storage device;

an operational data source in communication with a sensor affiliated with

5 the equipment, the operational data source coupled to the communications interface.

24. The system according to claim 16 further comprising:

a communications interface associated with the storage device, the

10 communications interface receiving human resources data from a human resources data source for storage in a second database of the storage device.

25. The system according to claim 16 further comprising an allocation

intermediary coupled to the scheduler, the allocation intermediary arranged to

15 coordinate the bringing together of required component data, worker data, tools, and instructions for planned maintenance at a common geographic location where the equipment is or will be situated.

26. The system according to claim 16 further comprising:

20 a purchasing system receiving information on the scheduled maintenance provided by the scheduler, the purchasing system executing purchasing of a required component for the equipment consistent with the scheduled maintenance.

27. The system according to claim 26 further comprising:

a supplier order fulfillment center coupled to the purchasing system via a communications network for exchanging transactional data with the supplier on at least one required component of the equipment, consistent with the scheduled maintenance.

28. The system according to claim 16 further comprising:

a personnel management system receiving information on the scheduled maintenance provided by the scheduler, the personnel management system executing purchasing of a required component for the equipment consistent with the personnel management.

29. The system according to claim 16 further comprising:

a supplier data source for providing data to a first database of the storage device via a communications network;

an operational data source for providing data to the first database via the communications network; and

a human resources data source for providing data to a second database of the storage device via the communications network.

30. The system according to claim 16 further comprising:

a personnel management system receiving data from the scheduler;

communications infrastructure coupled to the personnel management system, the communications infrastructure including at least one worker terminal for presentation of a maintenance assignment to the worker consistent with the scheduled maintenance.

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31. The system according to claim 30 wherein the infrastructure comprises a wireless system and the worker terminal comprises a wireless communications device.

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